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December 15, 1994

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The Honorable Reed Hundt  
Chairman  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION

Dear Sir:

Windata, Inc. respectfully submits the following comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM"), FCC 94-272, released November 8, 1994.

Windata is the performance leader in wireless LAN (Local Area Network) systems. Founded in 1990, we design, manufacture and market a family of products which operate in the RF frequencies of 2400-2484 Mhz. Our products provide high-speed (16 megabit per second) communication in compliance with Part 15 of the Rules. Within the environment of a single building, Windata's FreePort system connects computers located within 260' of a central location. Between buildings, Windata's AirPort systems connect facilities within 0.9 miles of each other.

### Background

The NPRM proposes allocation for 50 megahertz of spectrum that was identified by the Department of Commerce for transfer from Federal Government to private sector use. We agree with the general goals and objectives of the Commission in this endeavor, and we believe that the best allocation approach is one that would restrict the use of one of the three segments, those operating in the 2400-2417 Mhz band, to those devices operating in compliance with Part 15 of the Rules. We do not agree with the FCC proposal to make licenses for this spectrum available through competitive bidding. Adoption of that proposal would substantially undermine the market for RF products in this spectrum, and discourage the introduction of new services, features and technologies.

In 1985, the Commission amended Part 15 of the Rules to permit development and use of spread spectrum systems in the bands of 902-928 Mhz, 2400-2483.5 Mhz and 5725-5850 Mhz with up to one watt of transmitter output power. In 1990, to further encourage the development and implementation of this "exciting new family of technologies" the Commission modified Part 15 to maximize the flexibility and broaden opportunities for spread spectrum devices. The Commission's attempts to encourage this development

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have been successful and today millions of Part 15 spread spectrum devices provide a wide variety of communication services as well as services such as automated meter reading, inventory control, package tracking and shipping control, alarm devices, local area networks, and cordless phones.

In 1991, Windata was the first vendor to offer wireless local area network products that utilize the 2400-2483.5 Mhz band. The customer base for Windata's FreePort and AirPort products includes hospitals, federal agencies, state and municipal governments, and corporate institutions. These organizations would be adversely affected by this proposed change in allocation. It is not possible for their existing network systems to coexist with licensed systems which do not adhere to Part 15 of the Rules.

#### Discussion

In paragraph 9, Section III, of the NPRM, the Commission requests comments on an allocation approach, and proposes to make licenses for the three spectrum bands available through competitive bidding. In the 2402-2417 Mhz band, we believe that such a proposal would restrict the market for products and services. The 2402-2417 Mhz band lies within the 2400-2500 Mhz band that is available for use by ISM applications on an unlicensed basis. As mentioned previously, millions of Part 15 spread spectrum devices provide a wide variety of communication services as well as services such as automated meter reading, inventory control, package tracking and shipping control, alarm devices, local area networks, and cordless phones. The Commission should continue to encourage the development of these products and services, consistent with their actions of 1985 and 1990. The auctioning of licenses in the 2402-2417 Mhz band would be a radical and inconsistent departure from prior FCC policy. It will signal to our industry an unwillingness by the Commission to encourage and support the continued development of spread spectrum devices.

As the Commission itself noted in its August 9 report to Secretary Brown, there are approximately 80 million microwave ovens which represent potential interference in the 2402-2417 Mhz band. The existence of these devices seriously limits the commercial usefulness of a licensed service. Reallocation of this band will consequently provide little additional value to the public and will damage existing and future Part 15 uses of the band by the public.

In paragraph 18, Section III, of the NPRM, the Commission requests comments on retaining the segment 2402-2417 MHz for use by Part 15 devices. Windata strongly supports this approach. Anything less would have a devastating impact on the users of wireless LAN products. They would have to cease operation of their Wireless LAN system. In Windata's case, we have 500 different customer installations. Many of these users chose Windata's FreePort and AirPort systems because they did not have a viable

alternative to satisfy their networking requirement. Organizations such as St. Joseph's Hospital, St. John's Hospital, St. Luke's Hospital, Lake Charles Memorial Hospital, Kimborough Army Hospital, the U.S. Army's Fort Lewis facility, Microsoft Corporation, Packard Bell, Johnson & Johnson, Ford, General Motors, AT&T, Gates Rubber, Columbian Chemical, Unocal, S&C Electric, and Carnival Cruise Lines would experience denial of service, and completely without recourse to other technologies.

To protect the investments made by these users, and all other users of Part 15 devices, we request the Commission to raise the status of Part 15 devices, in the 2400 to 2483.5 Mhz band to co-primary. This change in status would be a positive signal and endorsement by the Commission for all users of Part 15 devices. This NPRM has caused considerable anxiety and question for both existing and new users of unlicensed Part 15 systems. The Commission needs to reaffirm their intention to embrace, support and encourage unlicensed use of this band by Part 15 devices. The change in status to co-primary would be consistent with the policy expressed in the NTIA's recent letter to Chairman Hundt, which pointed out the need to provide protected spectrum for Part 15 technologies and suggested that such treatment should be considered for the 2402-2417 Mhz band. (Letter from Assistant Secretary Irving to Chairman Hundt, dated December 12, 1994).

Moreover, Windata strongly supports the comments summarized in paragraph 12 of Appendix D. Internationally, the 2400-2500 Mhz band is the only frequency allocated for ISM use. Many foreign countries have followed the Commission's pioneering work in recognizing the potential for commercial use of this band by spread spectrum devices. In this regard and to facilitate the export of U.S.-manufactured Part 15 technologies, the Commission should not allocate 2402-2417 Mhz for services that would be incompatible with continued Part 15 development and use of the 2400-2483.5 Mhz band.

Windata is an active participant in the work of IEEE P802.11. As a charter member of this standards committee, we have been engaged in the development of a wireless standard for international operability in the 2400-2483.5 Mhz band. The removal of 2402-2417 Mhz would reduce the size of this band by 18%. American manufacturers of Wireless LAN products, consistent with the IEEE P802.11 standard, would be competitively disadvantaged in our attempt to compete on a worldwide basis.

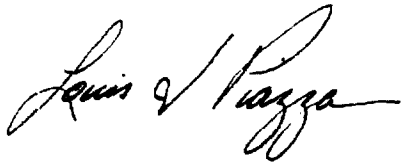
### Conclusion

As early pioneers in the development of unlicensed spread spectrum devices in the 2400-2483.5 band, Windata welcomes the opportunity to comment on the proposed reallocation. For the above stated reasons, and on behalf of our growing customer base, we urge that the Commission reserve the use of the 2400-2483.5 Mhz band for spread spectrum devices on a co-primary basis. The FCC needs to continue their prior initiatives

to encourage the development and implementation of this "exciting new family of technologies".

As small businesses, Windata, and other entrepreneurial Part 15 manufacturers, are particularly vulnerable to uncertainties in the regulatory process. We urge the Commission to provide a long-term, stable regulatory environment for unlicensed spectrum use, consistent with international spectrum allocations, which will be crucial to successful removal of barriers to participation in new wireless markets by small businesses. Such action can and will accelerate private sector development of products and services that will further both the National and Global Information Infrastructures.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Louis J. Piazza". The signature is fluid and cursive, with a long horizontal stroke at the end.

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